

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A data transmission system including: a plurality of subscriber units, having at least a subscriber unit with a video receiver and a subscriber unit without a video receiver, configured to interconnect with a central office unit via optical fibers, the central office unit is configured to multiplex a video signal with signals other than the video signal and to deliver them to the plurality of subscriber units, wherein each subscriber unit is configured to demultiplex a received signal, and each of said plurality of subscriber unit units comprising comprises:

a wavelength division multiplexer/demultiplexer configured to eliminate a particular wavelength signal from each of the plurality of subscriber units, ~~such that the wavelength division multiplexer/demultiplexer outputs wavelength signals other than the eliminated particular wavelength and prevents further downstream transmission of the eliminated particular wavelength,~~

~~wherein said wavelength multiplexer/demultiplexer includes a first optical waveguide, a second optical waveguide, and a filter positioned such that the first optical waveguide and the second optical waveguide form a junction at the filter~~

wherein the subscriber unit with the video receiver is configured to separate the video signal from the multiplexed signal received at the wavelength division multiplexer/demultiplexer and to input the video signal to the video receiver, and

wherein the subscriber unit without the video receiver is configured to separate the video signal from the multiplexed signal received at the wavelength division multiplexer/demultiplexer, to remove the video signal without termination, to separate the signals other than the video signal, and to input the signal other than the video signal to a

transmitting and receiving section.

Claim 2 (Previously Presented): The data transmission system according to claim 1, wherein said wavelength division multiplexer/demultiplexer is configured to reflect the particular wavelength signal to reject its input.

Claim 3 (Previously Presented): The data transmission system according to claim 1, wherein said wavelength division multiplexer/demultiplexer comprises a reflecting layer configured to reflect the particular wavelength signal at an input end surface of an optical fiber of the subscriber unit.

Claim 4 (Previously Presented): The data transmission system according to claim 3, wherein said reflecting layer comprises a dielectric multilayer filter.

Claim 5 (Currently Amended): The data transmission system according to claim 1, further comprising an optical fiber with a core and a cladding that covers an external surface of the core, and that has multiple notches formed on the cladding to reflect the particular wavelength signal.

Claim 6 (Original). The data transmission system according to claim 1, wherein said wavelength division multiplexer/demultiplexer comprises an optical wave guide that is made of a polymer and absorbs a signal with a wavelength of 1650 nm, which is employed as the particular wavelength signal.

Claim 7 (Currently Amended): A data transmission system including: a plurality of subscriber units, having at least a subscriber unit with a video receiver and a subscriber unit without a video receiver, configured to interconnect with a central office unit via optical fibers, the central office unit configured to multiplex a video signal with signals other than the video signal and to deliver them to the multiple plurality of subscriber units, wherein each subscriber unit is configured to demultiplex a received signal, and said central office unit comprises:

an optical amplifier configured to amplify the video signal to be transmitted; and
an optical distributor configured to distribute the video signal output from said optical amplifier and to supply the video signal output to a wavelength division multiplexer/demultiplexer,

wherein each of said plurality of subscriber units comprises a wavelength division multiplexer/demultiplexer configured to eliminate a particular wavelength signal from each of the plurality of subscriber units, such that the wavelength division multiplexer/demultiplexer outputs wavelength signals other than the eliminated particular wavelength and prevents further downstream transmission of the eliminated particular wavelength,

~~wherein said wavelength multiplexer/demultiplexer includes a first optical waveguide, a second optical waveguide, and a filter positioned such that the first optical waveguide and the second optical waveguide form a junction at the filter~~

wherein the subscriber unit with the video receiver is configured to separate the video signal from the multiplexed signal received at the wavelength division multiplexer/demultiplexer and to input the video signal to the video receiver, and

wherein the subscriber unit without the video receiver is configured to separate the video signal from the multiplexed signal received at the wavelength division

multiplexer/demultiplexer, to remove the video signal without termination, to separate the signals other than the video signal, and to input the signal other than the video signal to a transmitting and receiving section.

Claim 8 (Currently Amended): A data transmission system including: a plurality of subscriber units, having at least a subscriber unit with a video receiver and a subscriber unit without a video receiver, configured to interconnect with a central office unit via optical fibers, the central office unit configured to multiplex a video signal with signals other than the video signal and to deliver them to the ~~multiple~~ plurality of subscriber units, wherein each of the plurality of subscriber unit units is configured to demultiplex a received signal, and said central office unit ~~comprising~~ comprises:

a plurality of video signal generators configured to generate video signals with different wavelengths;

a first wavelength division multiplexer/demultiplexer configured to multiplex the video signals supplied from said plurality of video signal generators;

an optical amplifier configured to amplify the video signals output from said first wavelength division multiplexer/demultiplexer; and

an optical distributor configured to distribute the video signals output from said optical amplifier to a second wavelength division multiplexer/demultiplexer,

wherein each of said plurality of subscriber units comprises a wavelength division multiplexer/demultiplexer configured to eliminate a particular wavelength signal from each of said plurality of subscriber units, ~~such that the wavelength division multiplexer/demultiplexer outputs wavelength signals other than the eliminated particular wavelength and prevents further downstream transmission of the eliminated particular wavelength,~~

~~wherein said wavelength multiplexer/demultiplexer includes a first optical waveguide, a second optical waveguide, and a filter positioned such that the first optical waveguide and the second optical waveguide form a junction at the filter~~

wherein the subscriber unit with the video receiver is configured to separate the video signal from the multiplexed signal received at the wavelength division multiplexer/demultiplexer and to input the video signal to the video receiver, and

wherein the subscriber unit without the video receiver is configured to separate the video signal from the multiplexed signal received at the wavelength division multiplexer/demultiplexer, to remove the video signal without termination, to separate the signals other than the video signal, and to input the signal other than the video signal to a transmitting and receiving section.

Claim 9 (Currently Amended): A data transmission system including: a plurality of subscriber units, having at least a subscriber unit with a video receiver and a subscriber unit without a video receiver, configured to interconnect with a central office unit via optical fibers, the central office unit configured to multiplex a video signal with signals other than the video signal and to deliver them to the multiple plurality of subscriber units, wherein each of the plurality of subscriber unit units is configured to demultiplex a received signal, and each of said plurality of subscriber unit units comprises:

a first wavelength division multiplexer/demultiplexer configured to demultiplex the video signals and signals other than the video signal; and

a second wavelength division multiplexer/demultiplexer configured to eliminate a particular wavelength signal from each of said plurality of subscriber units, such that the wavelength division multiplexer/demultiplexer outputs wavelength signals other than the

~~eliminated particular wavelength and prevents further downstream transmission of the
eliminated particular wavelength,~~

~~wherein at least said first wavelength multiplexer/demultiplexer includes a first
optical waveguide, a second optical waveguide, and a filter positioned such that the first
optical waveguide and the second optical waveguide form a junction at the filter~~

wherein the subscriber unit with the video receiver is configured to separate the video
signal from the multiplexed signal received at the wavelength division
multiplexer/demultiplexer and to input the video signal to the video receiver, and

wherein the subscriber unit without the video receiver is configured to separate the
video signal from the multiplexed signal received at the wavelength division
multiplexer/demultiplexer, to remove the video signal without termination, to separate the
signals other than the video signal, and to input the signal other than the video signal to a
transmitting and receiving section.

Claim 10. (New). The data transmission system according to claim 1, wherein said wavelength multiplexer/demultiplexer includes a first optical waveguide, a second optical waveguide, and a filter positioned such that the first optical waveguide and the second optical waveguide form a junction at the filter.

Claim 11. (New). The data transmission system according to claim 7, wherein said wavelength multiplexer/demultiplexer includes a first optical waveguide, a second optical waveguide, and a filter positioned such that the first optical waveguide and the second optical waveguide form a junction at the filter.

Claim 12. (New). The data transmission system according to claim 8, wherein said wavelength multiplexer/demultiplexer includes a first optical waveguide, a second optical waveguide, and a filter positioned such that the first optical waveguide and the second optical waveguide form a junction at the filter.

Claim 13 (New). The data transmission system according to claim 9, wherein at least said first wavelength multiplexer/demultiplexer includes a first optical waveguide, a second optical waveguide, and a filter positioned such that the first optical waveguide and the second optical waveguide form a junction at the filter.

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